

Engineering Development Model

Power Splitter/Combiner

3 Way-0°

ZFSC-ED1161A/1

Important Note

This model has been designed, built and tested in our engineering department. Performance data represents model capability. At present it is a non-catalog model. On request, we can supply a final specification sheet, part number and price/delivery information.



Please click "Back", and then click "Contact Us" for Applications support.

CASE STYLE : J17

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C				
Parameter		Min.	Typ.	Max. Units
Frequency		0.2		900 MHz
Isolation	0.2 - 2 MHz		36	dB
	2 - 450 MHz		29	dB
	450 - 900 MHz		23	dB
Insertion Loss Above 4.8 dB	0.2 - 2 MHz		0.34	dB
	2 - 450 MHz		0.40	dB
	450 - 900 MHz		0.81	dB
Phase Unbalance	0.2 - 2 MHz		0.038	deg.
	2 - 450 MHz		0.169	deg.
	450 - 900 MHz		0.708	deg.
Amplitude Unbalance	0.2 - 2 MHz		0.005	dB
	2 - 450 MHz		0.009	dB
	450 - 900 MHz		0.097	dB
VSWR	SUM Port		1.27	(:1)
	OUT Ports		1.22	(:1)

MAXIMUM RATINGS	
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C

PIN CONNECTIONS	
SUM PORT	S
PORT 1	1
PORT 2	2
PORT 3	3

Functional Diagram



3 Way-0° Power Splitter/Combiner

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Typical Performance Data

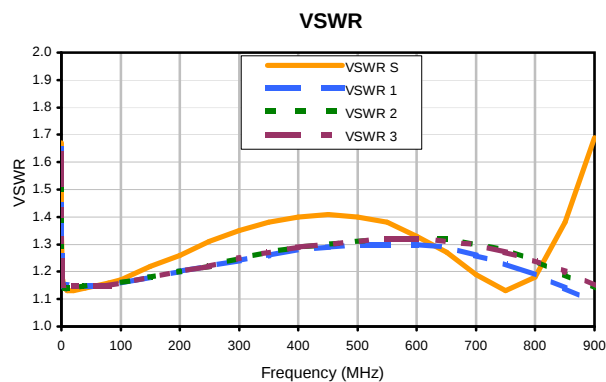
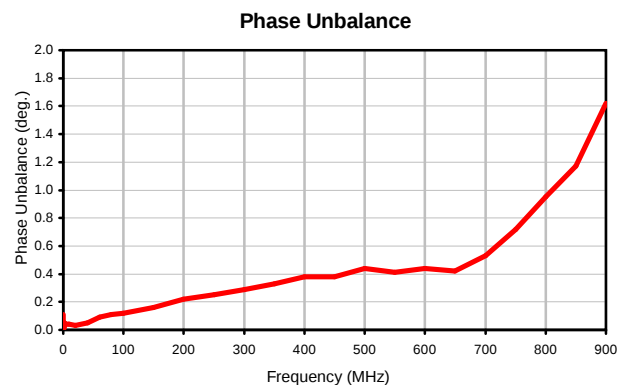
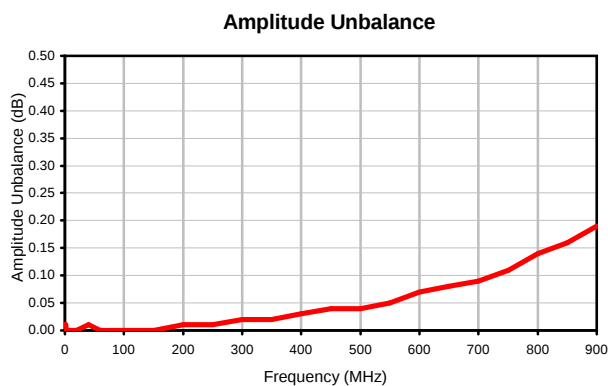
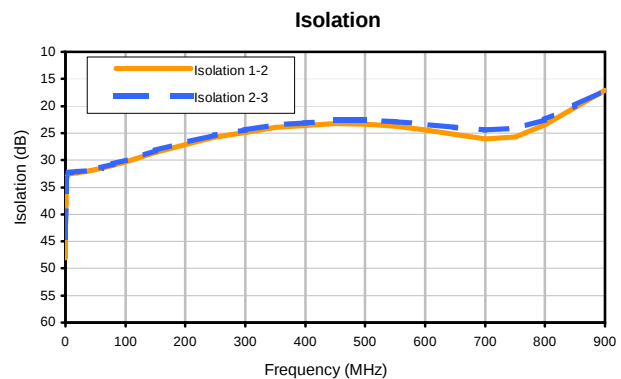
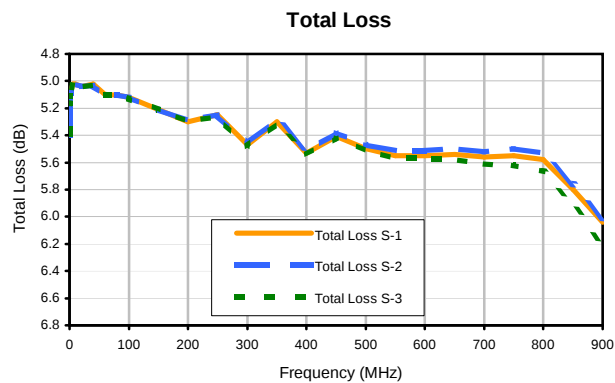
FREQ. (MHz)	TOTAL LOSS ¹ (dB)			AMP. UNBAL. (dB)	ISOLATION (dB)		PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR (:1)			
	S-1	S-2	S-3		1-2	2-3			S	1	2	3
0.2	5.40	5.40	5.39	0.01	48.10	44.11	0.11	0.2	1.67	1.65	1.63	1.63
0.4	5.17	5.17	5.17	0.00	41.67	41.56	0.02	0.4	1.34	1.32	1.32	1.32
0.6	5.14	5.14	5.14	0.00	37.71	37.28	0.04	0.6	1.25	1.24	1.23	1.24
0.8	5.13	5.13	5.13	0.01	35.90	35.43	0.01	0.8	1.22	1.20	1.19	1.20
1.0	5.12	5.13	5.12	0.01	34.89	34.45	0.03	1.0	1.20	1.18	1.18	1.18
1.2	5.11	5.11	5.11	0.00	34.25	33.84	0.02	1.2	1.19	1.17	1.16	1.17
1.4	5.10	5.11	5.11	0.01	33.84	33.46	0.03	1.4	1.18	1.16	1.16	1.16
1.6	5.10	5.10	5.10	0.01	33.57	33.21	0.03	1.6	1.18	1.16	1.15	1.15
1.8	5.09	5.09	5.09	0.00	33.36	33.03	0.05	1.8	1.17	1.15	1.15	1.15
2.0	5.08	5.08	5.08	0.00	33.22	32.90	0.04	2.0	1.17	1.15	1.15	1.15
5.0	5.02	5.02	5.03	0.00	32.63	32.42	0.04	5.0	1.14	1.14	1.14	1.14
10.0	5.02	5.02	5.02	0.00	32.43	32.26	0.04	10.0	1.13	1.15	1.14	1.15
20.0	5.04	5.04	5.04	0.00	32.29	32.14	0.03	20.0	1.13	1.15	1.14	1.15
40.0	5.02	5.03	5.03	0.01	32.04	31.87	0.05	40.0	1.14	1.15	1.15	1.15
60.0	5.10	5.10	5.10	0.00	31.55	31.35	0.09	60.0	1.15	1.15	1.15	1.15
80.0	5.10	5.10	5.10	0.00	30.93	30.70	0.11	80.0	1.16	1.15	1.15	1.15
100.0	5.12	5.12	5.13	0.00	30.30	30.03	0.12	100.0	1.17	1.16	1.16	1.16
150.0	5.21	5.21	5.21	0.00	28.56	28.23	0.16	150.0	1.22	1.18	1.18	1.18
200.0	5.30	5.29	5.30	0.01	27.14	26.77	0.22	200.0	1.26	1.20	1.20	1.20
250.0	5.25	5.25	5.26	0.01	25.73	25.32	0.25	250.0	1.31	1.22	1.22	1.22
300.0	5.47	5.46	5.48	0.02	24.88	24.44	0.29	300.0	1.35	1.24	1.25	1.25
350.0	5.30	5.28	5.31	0.02	23.97	23.49	0.33	350.0	1.38	1.26	1.27	1.27
400.0	5.53	5.51	5.54	0.03	23.59	23.07	0.38	400.0	1.40	1.28	1.29	1.29
450.0	5.41	5.38	5.42	0.04	23.27	22.68	0.38	450.0	1.41	1.29	1.30	1.30
500.0	5.50	5.47	5.51	0.04	23.34	22.66	0.44	500.0	1.40	1.30	1.31	1.31
550.0	5.55	5.51	5.57	0.05	23.72	22.91	0.41	550.0	1.38	1.30	1.32	1.32
600.0	5.55	5.51	5.57	0.07	24.38	23.35	0.44	600.0	1.33	1.30	1.32	1.32
650.0	5.54	5.50	5.58	0.08	25.28	23.92	0.42	650.0	1.27	1.29	1.32	1.31
700.0	5.56	5.52	5.61	0.09	26.11	24.45	0.53	700.0	1.19	1.26	1.30	1.30
750.0	5.55	5.50	5.62	0.11	25.67	24.11	0.72	750.0	1.13	1.23	1.28	1.27
800.0	5.58	5.53	5.67	0.14	23.47	22.56	0.95	800.0	1.18	1.19	1.24	1.24
850.0	5.80	5.76	5.92	0.16	20.28	19.94	1.17	850.0	1.38	1.14	1.19	1.20
900.0	6.04	6.01	6.21	0.19	17.13	17.08	1.62	900.0	1.69	1.09	1.14	1.15

¹ Total Loss = Insertion Loss + 4.8dB Splitter Loss

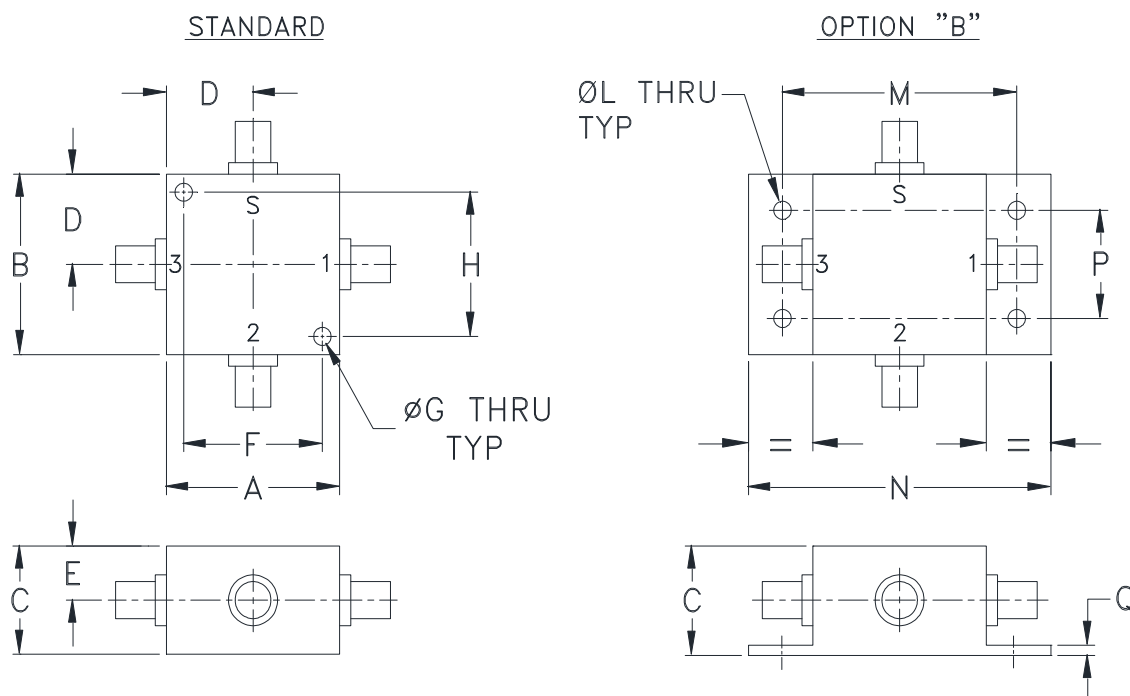
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Typical Performance Curves



Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N
J17	1.25 (31.75)	1.25 (31.75)	.75 (19.05)	.63 (16.00)	.38 (9.65)	1.000 (25.40)	.125 (3.18)	1.000 (25.40)	--	--	.125 (3.18)	1.688 (42.88)	2.18 (55.37)

CASE#	P	Q	WT. GRAMS
J17	.75 (19.05)	.07 (1.78)	75.0

Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm .03$; 3 Pl. $\pm .015$

Notes:

- Case material: Aluminum alloy.
- Case finish:
For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.
- Mounting bracket available on request. Add suffix B to part number
- For bracket version, option B, dimension "C" changes from .75 to .94 inches when connectors are type N.



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to 100°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Barometric Pressure	100,000 Feet	MIL-STD-202, Method 105, Condition D
Humidity	90% RH, 65°C Units may require bake-out after humidity to restore full performance.	MIL-STD-202, Method 103
Thermal Shock	-65° to 125°C, 5 cycles	MIL-STD-202, Method 107, Condition B
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition I